

J. E. DAVIS.
GAS HEATING STOVE.
APPLICATION FILED DEC. 7, 1909.

964,405.

Patented July 12, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

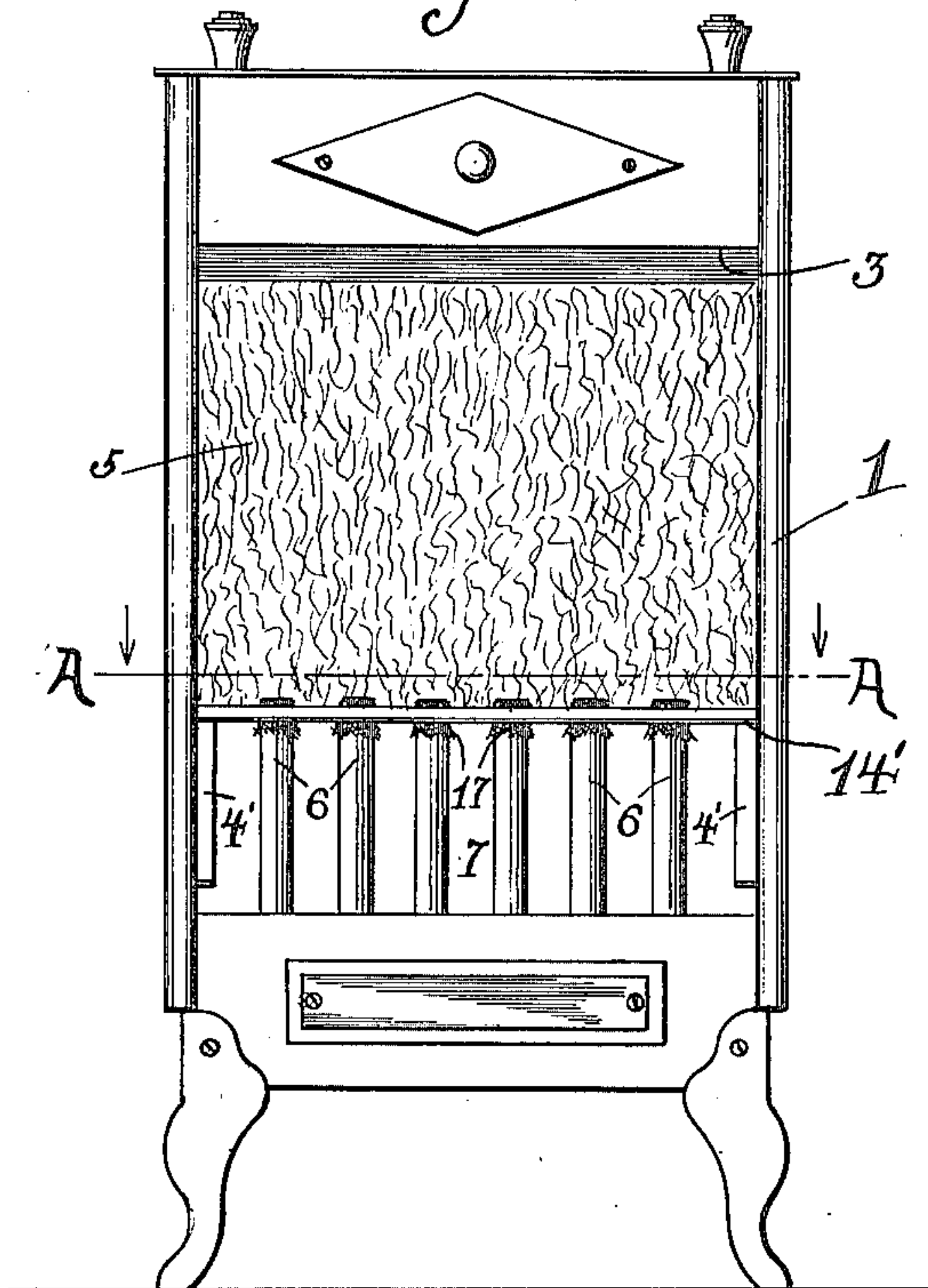
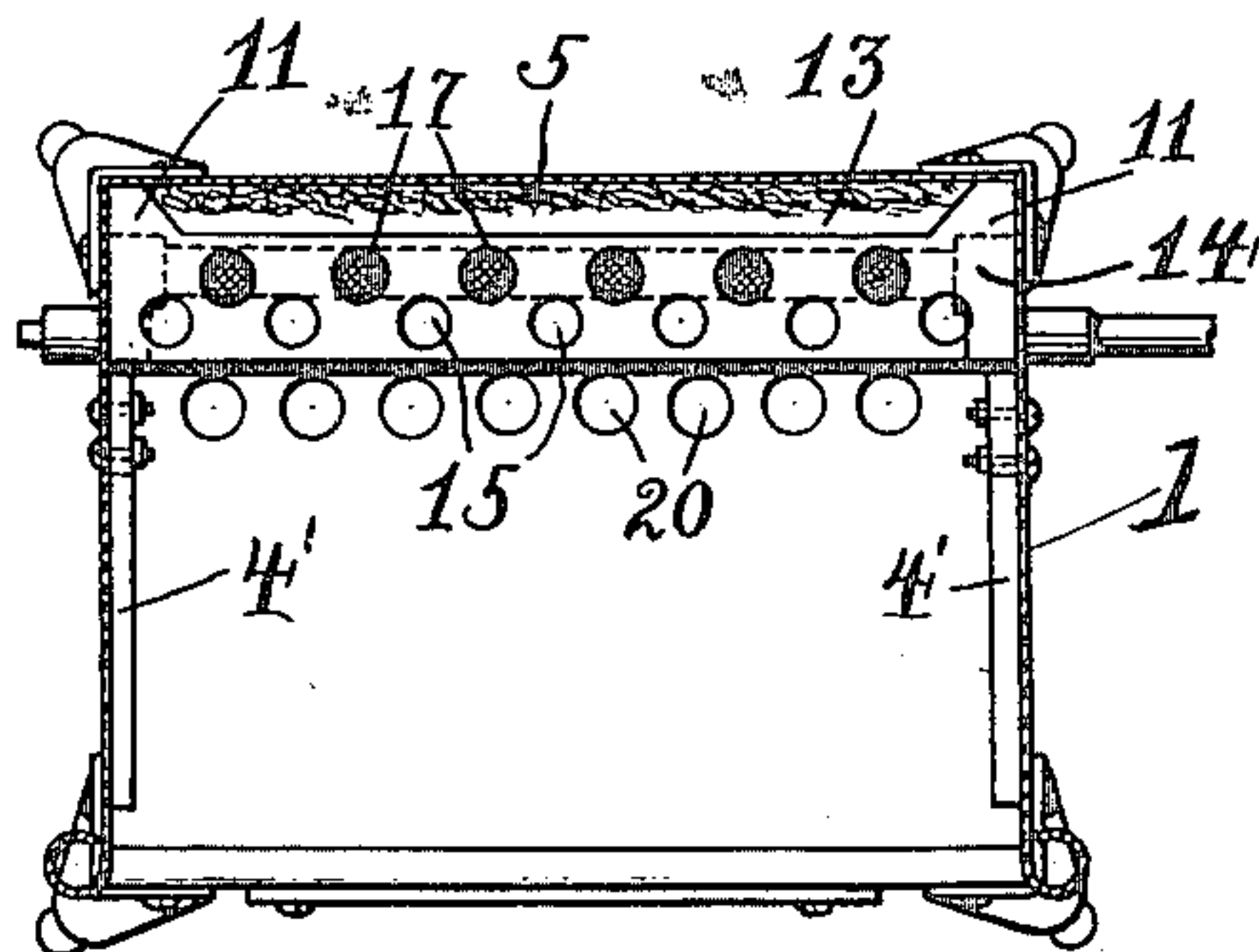


Fig. 3.



Witnesses

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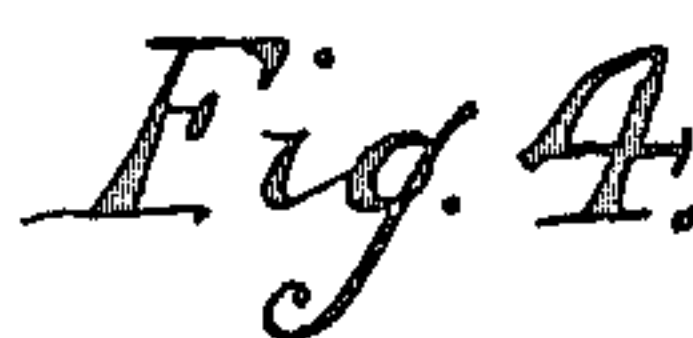
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JACOB E. DAVIS, OF IRONTON, OHIO.

GAS HEATING-STOVE.

964,405.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed December 7, 1909. Serial No. 531,819.

To all whom it may concern:

Be it known that I, JACOB E. DAVIS, a citizen of the United States, and resident of Ironton, in the county of Lawrence and State of Ohio, have invented certain new and useful Improvements in Gas Heating-Stoves, of which the following is a specification.

The present invention relates to gas heating stoves of the asbestos or incandescent type and has for its purpose to provide a stove of that character wherein the several burners are disposed in a manner that affords more perfect combustion, and which enables the asbestos face to be brought to a higher degree of incandescence.

Another object is to provide the stove with means whereby the cold air is taken from off the floor and caused to be circulated about the burners, thereby increasing the stove's heating capacity.

A further purpose of the present invention is the construction of a stove of the character in question, whereby greater rigidity and cheapness of manufacture is attained.

With the foregoing objects in view the invention possesses other features of merit which will be described in the course of the following extended description, and the points of novelty thereof set forth in the appended claims.

In the accompanying drawings, which show the structure of the stove in its preferred embodiment, Figure 1 is a front elevation thereof with deflecting plate removed, Fig. 2 is a central transverse section thereof, Fig. 3 is a horizontal section on the line A—A, Fig. 1, Fig. 4 is a front elevation of the burner proper, Fig. 5 is a top plan view thereof, partly broken away, and Fig. 6 is a section of the burner structure on line B—B of Fig. 5.

Referring to the several views in further detail and with like characters of reference indicating corresponding parts in the several views shown, the numeral 1 designates the stove body or casing constructed preferably of sheet metal and having an open face 2 designed after the usual manner. Disposed toward the top is a deflecting or radiating plate 3 which inclines downwardly and rearwardly, and from its lower edge extends downwardly the back plate 4 on the exposed surface of which is an asbestos covering 5. The plate 4 and its as-

bestos covering terminate immediately adjacent the burners (see Fig. 2). Extending downwardly from the direction of the lower edge of the asbestos face is the deflecting plate 3' which is supported upon ledges 4', which are secured to the side walls of the stove casing.

The several burners 6, which are of the Bunsen type are secured in parallel relation upon the plate 7, which is in turn suitably secured to the side walls of the stove casing by its flange portions 8, and through its connection 9 with the castings 10 (see Fig. 4). The upper portion of the plate 7 is bent rearwardly of the stove at each end and in that peculiar manner illustrated in Fig. 6 to provide a pair of shoulders 11 and that portion of the plate 12 between these shoulders is bent downwardly and against the plate 7. By reason of this arrangement a space or channel 13 is provided at the rear of the several burners which extends continuously from the lower edge of the asbestos covering to the bottom of the stove casing where it communicates with the atmosphere for a purpose that will be hereinafter explained. From the rear shoulders 11 and the folded part 12 the plate 7 has an integral and forwardly disposed portion 14, and which constitutes the head for the Bunsen burners, and is provided with a plurality of apertures 15 whose purpose is to permit a current of air to pass vertically and in front of the burners similar to that of the passageway 13. The front edge of the head 14 is crimped to provide a channel 14' within which lies the upper tuned edge of the radiator plate 3'.

The several Bunsen tubes 6 are secured directly against and to the plate 7 through the medium of screws 16 (see Fig. 2) and at their upper ends are secured to the head 14 through the medium of the fabrics 17 which fabrics are preferably of bronze mesh. By reason of thus securing the several tubes to the plate 7, said plate is heated, and thus materially raises the temperature of the current of air which passes through the passage way 13. As will be apparent, this arrangement increases the efficiency of the stove. Disposed immediately beneath the tubes 6 and spaced the proper distance therefrom is the fuel delivery or distributing main 18, which is provided with a plurality of apertures 19 arranged precisely centrally of the lower openings in said tubes. The

distributing main 18 has a screw threaded connection with the castings 10 (see Fig. 5) either of which castings may be in communication with the fuel supply. By reason of
 5 bolting the castings 10 solidly and at two points to the back plate 7 of the burner it will be impossible to have this pipe out of alinement as is the case in gas heating stoves wherein the fuel is supplied directly from
 10 the manifold pipe into the Bunsen tubes resulting in that when this pipe is in any position other than the true one the small holes which feed the Bunsen tubes are directed out of line of the burner. The present arrangement is further superior in that
 15 the fuel supply pipe enters the casting near where said casting is bolted to the body of the stove thus reducing to a minimum the likelihood of interference with the alinement
 20 of the manifold pipe, however much force may be used in making a connection.

That portion of the bottom plate of the stove casing directly beneath and to either side of the several burners is provided with
 25 a plurality of apertures 20, which through the medium of the channels 13 and the deflector plate 3' permit currents of air to be carried upwardly from off the floor and thereby supply a fresh amount of oxygen to
 30 the Bunsen tubes and subject the same to the heating influence of the burners whence it is directed against the asbestos covering 5 and produces or further facilitates the object stated.

35 Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent is:—

1. The combination with a gas heating stove having a casing and a plurality of
 40 Bunsen burners, of a means supporting said burners, said supporting means comprising a metallic sheet secured adjacent a wall of the casing and having shoulders to keep the same spaced therefrom and provide a
 45 passageway to the rear of said burners, said metallic sheet having an upper portion provided with openings adapted to receive the upper ends of the Bunsen tubes, and also having air passages therethrough in front
 50 of said openings, and a deflector plate disposed downwardly from said upper sheet portion and providing with said sheet an air passageway in front of said tubes, said front and rear passageways permitting cur-
 55 rents of air to flow upwardly therethrough from beneath the stove.

2. The combination with a gas-heating stove having a casing and a plurality of Bunsen burners, of a means supporting said
 60 burners, said supporting means comprising

a metallic sheet extending longitudinally of the stove and adjacent the rear wall of the casing, said wall and sheet providing an air passageway, the upper portion of said sheet being designed to receive the upper ends of
 65 the Bunsen-tubes wire gauze overlying the tops of the tubes and securing said tubes in said sheet, means providing an air passageway in front of the tubes, said front and rear passageways permitting currents of
 70 air to flow upwardly therethrough from beneath the stove, and means for securing said burner supporting sheet in the stove casing.

3. The combination with a heating stove having a casing and a plurality of Bunsen
 75 burners, of means for supporting the same comprising a metallic sheet having its upper portion designed to receive the upper ends of the Bunsen tubes, said tubes lying in intimate contact with said sheet for sub-
 80 stantially their length whereby to effect the heating of the sheet, wire gauze overlying the tops of the tubes and securing the same in said metallic sheet, and means securing the lower ends of the tubes to said sheet. 85

4. The combination with a heating stove having a casing and a plurality of Bunsen burners, of means for supporting the same comprising a metallic sheet having its up-
 90 per portion bent and provided with perforations adapted to receive the upper ends of the Bunsen tubes, said tubes lying in intimate contact with said sheet for substantially their entire length whereby to effect
 95 the heating of the sheet, wire gauze overlying the tops of the tubes and securing the same in said perforations, and screws securing the lower ends of said tubes to said sheet.

5. The combination with a heating stove
 100 having a casing and a plurality of Bunsen burners, of means for supporting the same comprising a metallic sheet having its upper portion bent laterally and provided with
 105 a plurality of perforations, the tubes of said burners lying in intimate contact with said sheet whereby to heat the same and having their upper ends extending through said perforations, wire gauze overlying the tops
 110 of said tubes and frictionally securing the same in said perforations, and screws securing the lower ends of said tubes to said sheet.

The foregoing specification signed at Ironton, Ohio, this 16th day of November,
 115 1909.

JACOB E. DAVIS.

In presence of two witnesses:

ANDREW S. COOPER,
 EDITH MAE HENRY.